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Cover

The frontispiece to Francis Bacon's magnum opus shows a representation of the Strait of Gibraltar flanked by the mythical pillars of Hercules, past which, before Columbus's journey, there was traditionally believed to be nothing. Here, Bacon's ship embarks on a voyage past those same pillars, beyond which, Bacon seems to be saying, lies all matter of discovery.

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GUY LAMOLINARA, Editor

LC in the News

Several national publications took note of recent events at the Library:

☐ Encyclopaedia Britannica's presentation of a new edition of *Great Books of the Western World* was reported by *The New York Times* Oct. 25.

And the national newsweekly *Insight* Nov. 19 covered the "Great Debate over What's Great." Writer Stephen Goode reported on the panel discussion of the influence of 20th century writers on Western thought.

☐ Librarian of Congress James H. Billington's announcement of the second group of 25 movies to be named to the National Film Registry was featured in publications with circulations as large as *USA Today*'s and as small as *Variety*'s.

Referring to LC's goal of preserving a copy of each of the films for its archive, USA Today said, "Garbo's mystique ["Ninotchka"] and Astaire's flair ["Top Hat"] will be preserved for the ages, thanks to the Library of Congress."

Variety Oct. 22 commented that "there is continued anger over the degree of protection the films will receive." The bible of the entertainment industry was reporting the worries of members of the National Film Preservation Board, which reports to Dr. Billington. According to *Variety*, the board guidelines, set by Congress, "will allow those who own, distribute, exhibit or broadcast Registry pics broad leeway to pan and scan, edit and 'lexicon' (compress or expand time) without being forced to label them as 'materially altered.' " Colorized films, however, must carry the disclaimer.

The Philadelphia Inquirer Oct. 19 interviewed director and screenwriter Joseph Mankiewicz regarding the selection of his 1950 Oscar winner "All About Eve." The 81-year-old filmmaker said he was "delighted" the movie had made the list, then joked, "You mean I only have *one* movie in the first 50 named?"

☐ The Library's pioneering work in film preservation was also the subject of a *New York Times* feature on the Motion Picture, Broadcasting and Recorded Sound Division.

"Acquisition, preservation, cataloging, storage: that is what we are about," division chief Robert Saudek told reporter Richard F. Shepard.

According to the story, the division's holdings have more than doubled, to 3.7 million items, since 1983, a testimonial to "the inroads of electronic records in a field once dominated by paper."

☐ Calling it "one of the finest collections of Judaica in the world," the March *Jewish Monthly* told its readers of the Library's vast holdings.

The collection encompasses not only books but rare manuscripts, such as Freud's first hand-corrected galleys for his *Moses and Monotheism* and Irving Berlin's handwritten lyrics to "God Bless America."

☐ But the Library's collections weren't the only subject of interest to the media. Performances from the Summer Chamber Festival, presented by the Library in the National Academy of Sciences auditorium, were reviewed by *The Washington Post*.

The Juilliard String Quartet's performance received excellent notices. The reviewer said the playing at times "took on a careful dignity capped by some exquisitely delicate playing" and the overall playing was "animated."

And the Beaux Arts Trio "glowed with warmth imparted by a faithful interpretation of the composers' intentions."

☐ Among others, *The Washington Post*, *Associated Press*, *The Hartford Courant*, *The New York Times* and *USA Today* carried reports on James Merrill's winning the Library's first Bobbitt Prize for poetry.

The Courant's interest was piqued by the fact that Mr. Merrill is the poet laureate of Connecticut.

☐ Finally, Law Librarian M. Kathleen Price was keynote speaker at the opening of the University of San Diego's newly renovated Legal Research Center, an event covered by the *San Diego Daily Transcript* and *San Diego Tribune*.

—*Guy Lamolinara*

Presentation Celebrates First U.S. Paper Mill

RittenhouseTown, in Philadelphia's Fairmount Park, celebrated the 300th anniversary of papermaking in America by presenting its Award of Distinction to Hugh B. Hanson "for his contribution to the history of paper."

John Y. Cole, director of the Library's Center for the Book, and Larry Sullivan, chief of the Rare Book and Special Collections Division, made the award Nov. 9 in Madison Hall. Mr. Hanson, a retired executive of Weyerhaeuser Co., a leading forest products and paper manufacturer, is in charge of a five-year development program at Rittenhouse, which for more than a century was at the center of the nation's papermaking industry. Among the projects planned are establishment of a visitors center.

The event commemorates William Rittenhouse's 1690 founding of the first paper mill in the 13 colonies.

LC Appropriation Update

Following is additional information on the Library's fiscal 1991 appropriation, as approved by Congress and signed by the president Nov. 5:

With respect to the Library's National Translation Center, the conference committee agreed with the Senate that it should remain in the Library until a study of science and technology activities at LC is completed. The conferees' stated intent is that it be a self-sustaining center by fiscal 1992.

For the Congressional Research Service, the conferees made reductions in the Library's authority to obligate funds approved by the Senate for positions for a Japan Task Force but approved two unfinanced positions for this activity.

For LC's salaries and expenses account, the conferees withheld authority to obligate funds for the establishment of a Mexican field office but approved additional funds to augment existing dealer contracts or for the Hispanic Division to conduct more extensive searches for Hispanic materials.

Authority to obligate additional funds added by the Senate for the purchase of West African materials was denied. There was also a reduction by the conferees of authority to obligate certain other increases in LC's salaries and expenses account.

NOTE: The story on page 387 (LC *Information Bulletin* Nov. 19) incorrectly referred to the "authority to obligate funds" as an "appropriation." The legislative branch appropriations bill contains *authority to obligate funds* amounting to $299,055,000 for the Library for fiscal 1991.

At the presentation, Larry Sullivan (photo at left) presents the award to Hugh Hanson (left); Leonard Schlosser, a collector and scholar, presents Mr. Hanson with a portfolio of contemporary American papers in honor of his contributions. Photos by Jim Higgins

Dr. Billington Visits Jakarta Office

After addressing the Australian Library and Information Association, Dr. Billington inspected LC's field office in Jakarta, Indonesia, during the first week of October (see page 421 for a story on the overseas offices).

He visited Indonesia's minister of social affairs and the speaker of Parliament.

At the LC office Dr. Billington met National Librarian of Indonesia Mastini Hardjoprakoso (see photo), who showed him one of the treasures of her Manuscript Section, while Dr. Sukarman, head of the National Library Development Board, and Dr. Tuti Munawar, chief of the Manuscript Section, looked on.

Islamic Book Meeting Draws Capacity Crowd

A standing-room-only crowd of scholars, ambassadors, librarians, journalists and others gathered in the Library's Mumford Room Nov. 8–9 for a conference on the "Book in the Islamic World."

Participants delivered papers on topics such as "The Koranic Text: From Revelation to Compilation," "The Book in Arab Grammatical Tradition" and "The Islamic Book in the Form of the Biographical Dictionaries."

The conference, which was accompanied by a display of books both old and new from the Arab world, was sponsored by LC's Near East Section and Center for the Book.

George Atiyeh (left) confers with Guy Brown of USIA (center) and John Cole at the evening reception; taking in the exhibit. Photos by Reid Baker

Catalogers Grill the Librarian on Reorganization

Dr. Billington Says Budget Increase Is Congressional Mandate

Congress has given the Library a major budget increase for 1991, and it is now time for the Library to deliver.

So said Dr. Billington at a lively forum for catalogers who filled the Mumford Room Oct. 31 to pepper him with questions about planned reorganization of the Cataloging Directorate and the implementation of Whole Book Cataloging.

"We are going to have to crack the arrearage problem in a dramatic way over the next three years or we are not going to be able to get the degree of public support we have had," Dr. Billington said. "The question is not *Can* we do it? but *How* are we going to do it? That is the priority that has been set for us by the Congress," the Librarian said.

The Librarian and Cataloging Directorate managers responded to catalogers' questions, which focused on these issues:

☐ **Increased productivity vs. reorganization of the Cataloging Directorate.** How can catalogers produce more catalog records faster at the same time they are going through a major reorganization into four new divisions and 27 new Whole Book Cataloging teams?

Dr. Billington said he recognizes a "tension" but he believes Whole Book Cataloging, which is the aim of reorganization, will decrease throughput time (as a pilot demonstrated) and will stem growth of the backlog through *long-term* efficiencies. A parallel attack on arrearages (mostly in nonbook formats) by additional staff members hired with new 1991 funds will provide *short-term* gains and complement the long-term Whole Book effort, he said.

Other points raised:

☐ **Whole Book Cataloging—solo or team effort?** Catalogers at the forum argued that team cataloging is more productive than one person having to learn both descriptive and subject cataloging skills in order to process an entire book.

Susan Vita, chief of the MARC Editorial Division, and head of the Whole Book Cataloging pilot project, later predicted that the team approach will prevail throughout reorganization. So far, tests of a one-on-one approach, involving cross-training of descriptive and subject catalogers so one person can catalog one book, are inconclusive, she said.

"We probably will find one-on-one is feasible, but I think we will maintain flexibility so that some catalogers only do subject cataloging, some only do descriptive, and some do both," Ms. Vita said. "If cross-training is expanded, my guess is that it would be phased in gradually, perhaps starting with volunteers."

☐ **Automation.** What can be done to modernize LC's computer system? The Library cannot electronically transfer on-line catalog records from OCLC to LC's system; OCLC records have to be printed out and rekeyed—a time-consuming process. Also, catalogers periodically have to cease working during "down time" on LC's overtaxed on-line system that cannot keep up with user demands.

Dr. Billington said he will make a major request to Congress next year for funds for Library automation.

☐ **Ergonomics.** Management is indifferent to pain caused by lighting, furniture and keyboard placement, catalogers complained in a letter to the Librarian. What can be done to correct the glare of overhead lights on VDT screens? Will a vacant position for an industrial hygienist be filled?

Dr. Billington said he had reviewed the record, finding that "an extraordinary range of things have in fact been done." He said management would respond to specific cases.

☐ **Streamlining documentation.** Catalogers asked Dr. Billington to respond to their written request that on-line documentation, cataloging rules and rule interpretations be simplified and streamlined. The Librarian said an effort "to reduce, simplify, rationalize and get a more simple and user-friendly form of documentation" is at the heart of continuing dialogue with LC cataloging partners (other libraries and bibliographic services); it will be the subject of papers prepared for a major spring conference. Modifications "have to be done once and done right," he cautioned, because catalogers "around the country and around the world . . . ultimately depend on what you do."

—*Gail Fineberg*

British Film Expert to Advise Library

Mr. Francis Goes to Dayton

David Francis takes stock of the vast LC film collection in the Madison Building.

David Francis, former curator of the National Film Archive of the British Film Institute, has received a one-year appointment as a consultant to the Library's Motion Picture Preservation Laboratory at Wright-Patterson Air Force Base in Dayton, Ohio.

Mr. Francis has been in Dayton since September. When asked to characterize what he has found so far, he answers without hesitation: "A small group of really enthusiastic people doing their best in difficult circumstances."

Broad responsibilities for suggesting areas of improvement in the Library's film preservation facility, the largest publicly funded operation in the United States, are part of Mr. Francis's duties. He is uniquely suited to the task, having 16 years' experience as head of Great Britain's National Film Archive. A cofounder of England's Museum of the Moving Image, Mr. Francis was awarded the Order of the British Empire (O.B.E.) in 1986 for outstanding achievement in his field.

As head of the National Film Archive, Mr. Francis presided over the creation in 1985 of the J. Paul Getty Jr. Conversion Centre, an $8 million facility that enables the Archive to transfer more than 5 million feet of deteriorating nitrate film to safety film per year.

The Getty Centre was built with a combination of a private contribution and funding from the government, a formula Mr. Francis hopes to duplicate in the United States.

"The only way we will move forward," says Mr. Francis, "is with the cooperation of the film and TV industries."

Because preservation efforts started late, Mr. Francis noted, it is estimated that only about 9 percent of the films from the silent period survive today.

"Cinema and television have been the most important influence on 20th century society," he asserts. "We shall not be able to understand the influences unless we preserve the output of these media now."

Full-time staff work in Dayton, supplemented part-time by film students.

Since 1967 the Library has completed approximately half of all nitrate-to-safety-film conversions performed in the United States at a rate of about 3 million feet annually.

Mr. Francis's first order of business has been to coordinate improvements to the physical structure at Dayton. Walls and the roof needed repairs to ensure adequate temperature and humidity control.

Vintage films often need to be handled by vintage equipment. But at present there is very little in the way of back-up machinery.

Another area Mr. Francis would like to see expanded is basic research in film chemistry and preservation. Although transfer of nitrate films to safety stock continues to be the best method, an ominous threat looms in something called the "vinegar syndrome."

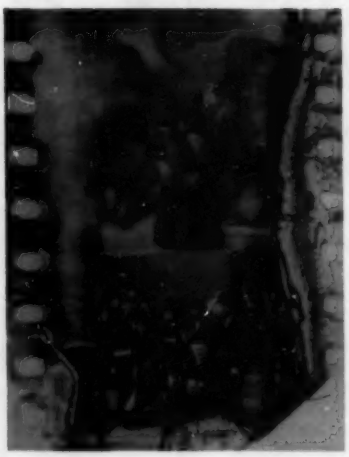
This appears to be related to improper storage conditions, according to Mr. Francis, which can result in the physical breakdown of the base and the release of the characteristic odor associated with acetic acid. But more research is needed to understand the process fully.

The fading of color films produced since the early 1950s is another potentially serious area. It is now difficult to see any color in films from the mid to late 1950s.

"It's a luxury not to have line management responsibilities," Mr. Francis admits, "but if you're always in a rush, you never have time to take stock. We need to stop and ask, 'Why are we doing it this way?' "

Fortunately for the Library, Mr. Francis will do more than just pose the questions. According to his contract, he will also provide the answers.

—Story and photos by Craig D'Ooge



Deteriorating nitrate film stock

Literacy Time Capsule To Be Opened in 2089

"We gladly accept the custody of this Literacy Time Capsule, which represents our hope and confidence that 100 years from now America will truly be a nation of readers," said John Y. Cole, director of the Center for the Book, in accepting the capsule during a Nov. 14 LC ceremony.

The event was part of National Young Reader's Day, sponsored by the Center and Pizza Hut's BOOK IT! National Reading Incentive Program.

"This book reached down deep inside of me and touched my heart."

This book "tells about a young boy who is willing to work hard and make sacrifices to reach his goals."

"This book represents sticking together in good times and bad and thinking about others before yourself."

So read a few of the letters from fourth-, fifth- and sixth-graders who entered a nationwide competition about their favorite books.

The time capsule will be "buried" at the Library to mark the second annual event. The winning letters (one from each state), along with the students' photos, what their interests are and their favorite books were sealed in the capsule.

According to Eunice Ellis, director of the BOOK IT! program, the letters and book choices "show [the students'] sensitivity to human suffering and a return to traditional values."

Included among the titles chosen were "Six Months to Live," the story of a 12-year-old girl's battle with cancer; and "Number the Stars," about a Jewish family's escape from the Nazis. Choices also included such classics as "The Yearling," "Little Women" and "The Adventures of Tom Sawyer."

"The judges were impressed with the books selected," said Dr. Cole. "The books showed that the students were interested in reading about real life, including the Holocaust, poverty and the trauma of losing a loved one."

—*Guy Lamolinara*

The students wait their turn to make their personal contributions to the time capsule; the event concluded with a performance by Literary Theatre, a nonprofit group that stages skits with literacy-related themes. Photos by Jim Higgins

Symposium Offers Look at "Independent Spirits" of Picture-Book Makers

An all-day symposium at the Library Nov. 2 provided insight into the creative minds of some of the most noted children's picture-book makers of the 20th century.

Organized by Sybille A. Jagusch, chief of the Library's Children Literature Center, the symposium looked at children's picture books from many different angles. Barbara Bader, former editor of *Kirkus Reviews*, began the program with an overview, "Aliki to Zemach, 1970: A Profile of Diversity in American Picture Books."

The next speaker, Emma Mamedova, from the Museum of the Book at the Lenin Library in Moscow, concentrated on the history of Russian children's books from the 16th to 20th centuries. She delivered the paper of her collaborator, Ella Gankina, an art historian and author of a study of art in Russian children's books.

John Michael, designer and founder of Acorn Press, read designer-illustrator Warren Chappell's paper, in which Mr. Chappell discussed the "independent spirits" of the design world who had influenced him throughout his long and fruitful career. Known especially for his artistic 1940 interpretation of *Peter and the Wolf* and other classics, Mr. Chappell is currently artist-in-residence at the University of Virginia.

An authority on Beatrix Potter who has been awarded the M.B.E. (Member of the British Empire) for her services to children's literature, Judy Taylor discussed Beatrix Potter from the vantage point of her own letters, 1,400 of which she has collected over the past five years. She asserted that the letters revealed that "Beatrix Potter was even more than a fine storyteller and a gifted painter. She was a pioneer in a number of fields, a woman with a broad range of interests, a woman of strength and of firm opinions who triumphed over parental repression . . . altogether a remarkable woman—a truly independent spirit."

Discussing the "independent spirits" are (from left) Emma Mamedova, Judy Taylor, Sybille Jagusch and Emma Joy Dana.

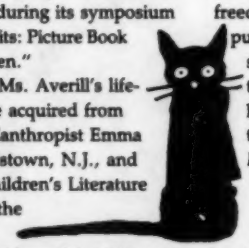
Seymour Chwast, founding partner of Pushpin Studios, rounded out the day's presentations with a slide lecture on the lively and imaginative picture books that he has created for children—from a book that opens up to reveal different sized pages (*The House That Jack Built*, 1973), to one that can be read from either end (*Tall City, Wide Country*, 1983), to one that opens up into a theater (*Harry's Bath*, 1990).

—*Helen Dalrymple*

A Tribute to Esther Averill

Esther Averill, publisher, author and illustrator, was honored by the Children's Literature Center during its symposium "Independent Spirits: Picture Book Makers for Children."

Selections from Ms. Averill's lifetime of work were acquired from the author by philanthropist Emma Joy Dana of Morristown, N.J., and donated to the Children's Literature Center as part of the symposium.



Best known to children of the 1940s and 1950s for the black cat in her Jenny Linsky stories, Ms. Averill was a cofounder of Domino Press in France in the late 1920s. Domino Press books were unique at the time in that they brought a new color, freedom and verve to children's book publishing by using lithographs instead of offset sketches to reproduce the lively artwork of Feodor Rojankovsky and by printing in five rather than three colors. Their first book, *Daniel Boone*, 1931, was a huge success.

The three collaborators returned to New York with Domino Press in the mid-1930s to produce additional books. After the press closed, Esther Averill continued work, doing her own writing and illustrating. Her Jenny Linsky stories are still popular with children.

Hispanic Heritage Month Wraps Up

A monthlong celebration of "the richness of difference" recently was capped off by a screening of the film "El Norte," followed by a panel discussion of the immigration of Hispanics to the United States.

The screening was the final event in the Library's celebration of Hispanic Heritage Month, which presented a variety of artistic expressions of various ethnic groups.

The events were organized by Olga Padilla of the Human Resources Directorate, the Hispanic Division and other LC organizations.

The monthlong celebration began with a panel on "Hispanic Arts and Literature in Washington." Moderated by Dr. Georgette M. Dorn, specialist in Hispanic culture of the Hispanic Division, the panel featured Hispanic-American creative artists who work in the Washington area. Chilean-born Elena Castedo, whose first novel, *Paradise*, was nominated for the National Book Award, spoke about "The Author as Janus: Writing a Novel in Two Languages." Barbara Mujica, professor of literature at Georgetown University, as well as a novelist and short story writer, addressed the topic "The Character: From Mind to Page to Stage." Rei Berroa, critic, musician and professor of literature at George Mason University, who was born in the Dominican Republic, chose "Poetry and Music" as his topic. Salvadoran Mario Bencastro, commented on "A Salvadoran Novel Written in Washington," the genesis of his recent novel, *Disparo en la catedral*. The last speaker was Argentinean Hugo Medrano, actor, critic and director of Gala Hispanic Theater. Medrano spoke about Gala and its impact on the resident Hispanic and Anglo community.

Catalina Vasquez Villalpando, treasurer of the United States, delivered a keynote address followed by a presentation of the Educational Organization for United Latin Americans.

Dancers from the EOFULA Senior Citizens Center; Georgette Dorn (at lectern) moderates a panel that included (from left) Mario Bencastro, Barbara Mujica, Elena Castedo and Rei Berroa. Photos by Reid Baker

A Survey of the Science Collections
In Search of the "Great Books"

by Leonard C. Bruno

The science collections of the Library of Congress can literally be all things to all people.

Like the story of the elephant and the blind men, the information obtained depends on what is encountered.

The collections' vast size and comprehensiveness, and the range and breadth of the formats and subjects they embrace, necessarily make for a body of knowledge that at best can be controlled rather than known intimately or fully understood.

In the real world of scholarship however, no one sets out to know everything. Every researcher approaches the Library's science collections with certain, necessarily limited goals. Each views the collections from his or her own perspective and employs a specialized, highly individual sifting method of separating the relevant from the irrelevant.

The results and impressions obtained from one particular method of encountering the Library's science collections—searching for its "great books"—follows. This traditional method of broadly surveying a collection was used by the author to write *The Tradition of Science: Landmarks of Western Science in the Collections of the Library of Congress*, published by the Library in 1987.

A journey through LC's collections in search of science classics in their first printing can be a unique experience if approached properly. Confronting the first edition of a science classic can have a special meaning for the researcher: It allows him, in a way, to see the work not only by itself—without the intervening years of interpretation—but also to share in its author's first blush of enthusiasm or tentativeness, assurance or doubt.

One's first instinct is to regard many of these older works as venerable relics, worthy of respect and even awe. Yet such veneration is like considering an individual only as he is encountered as a very old man, ignorant of the fact that he was at one time a vital, active, even exuberant youth.

Books, too, have a chronological existence, as do the ideas they contain. However commonplace an idea or theory seems once it is transformed into accepted wisdom, its genesis was usually quite the opposite. It is sometimes difficult to imagine a now-staid and secure theory as a fledgling idea—timorous and even uncertain.

Encountering science classics in their original printings—ignoring their sometimes battered appearance or their smell of the ages—and regarding them as they first appeared with all the hopes and doubts of their author, enables us to share in the real sense of adventure and discovery each holds. Studying the major works of science as they were first written offers the chance of recapturing some sense of the excitement about the natural world that their authors must surely have felt.

Charles Lyell, the geologist whose work influenced Charles Darwin, described this phenomenon when he wrote that "the charm of first discovery is our own" when we first meet a classic.

The Library does not, however, have a first edition of every science classic, and in fact, there can be no definitive list of what those titles should be. But it is safe to say that the Library's collections contain at least three-fourths of the books on anyone's list. As for those missing titles, the Library's depth and range of facsimiles, later editions, translations and compilations often compensate for any lack.

A frontispiece by Stefano della Bella to Galileo's Dialogue, *1632, shows Aristotle, Ptolemy and Copernicus discussing astronomy. Galileo was able to pursue research in Florence in 1616–32 despite papal disapproval, since he worked under the aegis of the Medici family. The family did not protect him from the wrath of the Roman Inquisition, however, and it was the* Dialogo *and its open defense of Copernican heliocentrism that occasioned his trial and his abjuration of the work itself.*

A sampling of the Library's science treasures is best accomplished by discussing them within their traditional disciplines, since most were written long before today's interdisciplinary blurring. Beginning with what may be the oldest science—astronomy—a trip through the collections reveals both order and mystery.

Mystery is found in the subject itself—the cosmos—and is reflected in the work and life of one of its greatest thinkers, Johann Kepler. Kepler is best represented in the Library by his *Harmonices mundi* (*Harmonies of the World*), published in Linz in 1619. This mystical foray into the music of the spheres also contains Kepler's discovery of the principles of planetary motion.

The order that astronomy often evokes is exemplified in those works that literally sought to order the universe. These begin with the Library's vellum-bound, 1515 edition of Ptolemy's *Almagest* (*The Greatest Treatise*), printed in Venice, a work whose geocentric idea dominated Greek, Arab and medieval thought. It is not exaggerating to say that during the nearly 14 centuries separating Ptolemy and Nicolaus Copernicus, no major astronomical discoveries were made.

With the 1543 Nuremberg publication of his *De revolutionibus orbium coelestium* (*On the Revolutions of the Heavenly Spheres*), Copernicus offered the world his revolutionary notion that "in the midst of all dwells the Sun," an idea implying that the universe was systematic, mathematical, knowable and, above all, simple. The Library's first edition was rebound during the 19th century in Moroccan leather and its pages are gilt-edged.

The Library also has Galileo's epic 1632 work in first edition, *Dialogo . . . sopra i due massimi sistemi del mondo* (*Dialogue Concerning the Two Chief World Systems*). It was this publication in Florence and its open defense of Copernican heliocentrism that led to the famous trial and Galileo's abjuration at the hands of the Roman Inquisition.

In 1642 Galileo died at age 78, and Isaac Newton was born on Christmas Day. Twenty-four years later in his *annus mirabilis*, the young Newton concluded in a bold, intuitive stroke that the physical laws of the heavens and Earth were the same, ruling both planets and apples.

He would wait another 21 years to tell the world, but when he did in his *Philosophiae naturalis principia mathematica* (*Mathematical Principles of Natural Philosophy*), his three laws of motion laid the groundwork for his law of universal gravitation and all that was to follow. The Library has the 1687, London, first edition of what is regarded as the greatest scientific work ever written. Many also regard it as the least understood yet most accepted scientific work in history. Despite its impenetrability, Newton's work marked the culmination of the scientific revolution begun by Copernicus.

The Library's collections also contain representative first printings of virtually all of the major figures in astronomy, from the argumentative and hard-drinking 16th century Danish character, Tycho Brahe, through the brilliant and multitalented Christiaan Huygens, to the great French codifier Pierre Simon Laplace.

The diligent researcher can also find astronomic works of varying antiquity, substance and interest. One of the oldest items is the Library's *Almanach perpetuum*, a wooden-bound text with a metal clasp published in Leira, Portugal, in 1496. Its astronomic tables were used for navigation by both Vasco da Gama and Columbus. The Library also has an early printed copy of one of the most often used astronomy textbooks, Johannes de Sacrobosco's *Sphaera mundi*, published in Venice in 1485.

Other gems in the collections are the *Astronomicum caesareum* (*Caesar's Astronomy*) of Petrus Apianus (Ingolstadt, Germany, 1540) whose 37 full-page colored volvelles (movable, rotating circles) make it one of the most beautiful books ever made. The names and works of Hevelius, Herschel and Halley are also well represented there.

If astronomy is characterized by its order and mystery, botany might be best described as perhaps the most gentle of sciences. Although both imply disciplined observation, the careful study of a flower is a calm, unobtrusive act that could be likened to the peaceful contemplation of a beautiful object.

The Library's copy of *De historia et causis plantarum* (*On the History and Origins of Plants*), printed in Treviso, Italy, in 1483, is considered to be the oldest distinctively botanical treatise

(Cont. on p. 416)

Science *(Cont. from p. 415)*

extant, and its Greek author, Theophrastus, is considered the father of scientific botany.

Dioscorides' most prominent editor was the late Renaissance Italian physician and botanist Pietro Andrea Mattioli. His masterwork was published in 1544 in Italian, and was phenomenally successful. This illustration of a mandrake, whose shape resembled a human figure, warned that the semihuman plant would skriek when pulled from the ground, causing madness or injury to the person who pulled it up.

Scientific botany is usually distinguished from its pragmatic counterpart, the study of herbals. This large body of practical remedies and recipes begins in the Library's collections with *De materia medica* (*On Medicinal Substances*) of Dioscorides. The Library has not only its 1478 Colle, Italy, version, but also the beautiful Renaissance version by the Italian physician Pietro Andrea Mattioli published in Venice in 1558.

Other early printed herbals in the Library are the *Herbarium* (Rome, circa 1483) and *Herbarius Latinus* (Venice, 1499).

The so-called "German fathers of botany" are best represented in the Library by Leonhard Fuchs's *De historia stirpium* (*History of Plants*), a botanical masterpiece published in Basel, Switzerland, in 1542. The subsequent work of the microscopists is seen in the efforts of Malpighi, Grew and most spectacularly, Robert Hooke. The magnificent plates in his *Micrographia* (London, 1665) reveal some of the most handsome microscopic observations ever made.

In 1735 Linnaeus's *Systema naturae* established a method of classification, or formal description, of living things that is essentially the one we use today. This work consists of only seven folio leaves, five of which are printed on both sides, and is one of the rarer works in the history of science. The Library of Congress has its facsimile made from the first edition in the Amsterdam Zoological Library, as well as the enlarged second edition (Stockholm, 1740) and the now-standard 10th edition published in 1758–59.

Besides the work of Mendel, De Vries, Schleiden, the Jussieu family and Haller, the Library has the premier work of one of the greatest flower painters of all time, Pierre Joseph Redouté's *Les roses* (Paris, 1817–1824). Not only is the Library's copy one of only five large folios ever made, but it was Redouté's personal copy.

As an aside, the Library also has the genuine forays into science of both Johann Wolfgang von Goethe and Jean Jacques Rousseau. In 1771 Rousseau published a general botanical textbook that helped spur the general popularity that botany experienced during the late 18th century. LC has a collection of his botanical work, *La botanique de J.J. Rousseau* (Paris, 1805), whose 65 color plates were made after the paintings of Redouté. In contrast, Goethe's *Versuch die Metamorphose der Pflanzen zu erklären* (*An Attempt to Explain the Metamorphosis of Plants*) (Gotha, Germany, 1790), is a thin, unassuming book with no illustrations. But it nonetheless coined the word "morphology" and directed scientific attention to the significance of plant form and structure.

Charles Darwin forced mankind to recognize its shared nature with the rest of the animal world, and ever since, zoology has emphasized the primal bond of kinship between ourselves and animals. If a fascination with the workings of nature and a desire to understand them defines mankind as an intellectual or reasoning race, then a genuine regard for the animals of nature makes us a compassionate, even estimable species.

It was Aristotle—"in all natural things there is somewhat of the marvelous"—whose fascination with the animal world set the tone and in a sense, laid the foundations for Darwin's zoological work. The Library has Aristotle's three major zoological treatises as they were first

Konrad Gesner's massive Historiae animalium *stands as the best purely zoological work of the Renaissance period and remained the standard reference work for over two centuries. These images show different types of whales—each a fearsome monster. The top shows a ship being sunk by a whale. The middle depicts a captured whale being flensed. The bottom curiously shows endangered sailors on the back of a whale, having anchored to the beast in the mistaken belief that it was an island.*

printed in Venice in 1476 under the overall title *De animalibus* (*On Animals*).

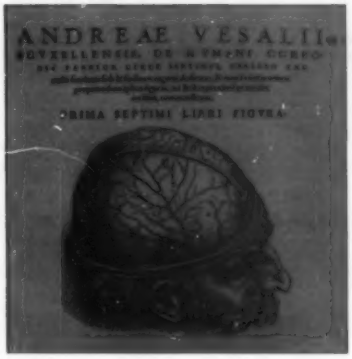
Renaissance zoology is well represented by Konrad Gesner's enormous *Historiae animalium* (*Of the History of Animals*), which LC has in first edition (Zurich, 1551–1558). Containing some 1,000 woodcuts of fanciful as well as real beasts, this massive work typifies the Renaissance spirit of inquiry as well as its fascination with the bizarre.

The works in the Library of Anton van Leeuwenhoek and his contemporary, Jan Swammerdam, are evidence of what these persistent geniuses did when they turned their new optical instruments on lower animals and microscopic life. In the next century, LC's first edition of Buffon's *Histoire naturelle*, with its bold ideas and sweeping generalizations, can be viewed as a precursor to Darwin.

Its 15 volumes plus five supplements were published in Paris from 1749 to 1767. So too can the Library's first edition of Jean Baptiste de Lamarck's *Philosophie zoologique*, which the Library has in its 1830 Paris edition, be considered a major step in the direction of Darwin's ideas.

Those revolutionary ideas can be read as they were first made public in 1859. The Library's copy of Darwin's *On the Origin of Species by Means of Natural Selection* is one of only 1,250 copies that were first printed in London that year. The Library also has his joint 1858 paper with Alfred Russel Wallace as published in the *Journal of the Proceedings of the Linnean Society* and Darwin's *H.M.S. Beagle* experiences and observations as first published in 1839 in London in his *Journal of Researches*.

The uniquely American zoological experience is well represented in the collections by the major first editions of Mark Catesby, William Bartram and Alexander Wilson, and culminates in the Library's magnificent four-volume elephant folio of John James Audubon's *The Birds of America*, published in London between 1827 and 1838. It is interesting to note that when Audubon appended



Andreas Vesalius was prompted to write his own anatomical textbook when he discovered that the prevailing works of the medical establishment were incorrect about many aspects of human anatomy. In true Renaissance spirit, Vesalius decided his book would adhere strictly to what his dissections actually revealed. The result is a work of both great medicine and great art.

the names of his book's prepublication subscribers or promised buyers, the name of the Library of Congress appeared first on his list of American individuals or institutions.

The story of medicine could be described as mankind's journey of self-discovery, and that journey is well documented in the collections. It begins with the work of Hippocrates or the Hippocratic school, whose tradition of reason, observation and moral conduct would eventually become the cornerstone of medicine. The first complete Latin edition of Hippocrates' *Opera* was published in 1525 in Rome, and the earliest in the Library's collections was printed in Basel in 1546.

Medieval medicine is best seen in the Library's copy of the famous poem *Regimen sanitatis Salernitanum* (*The Salerno Regimen of Health*), published in Louvain, Belgium, sometime between 1483 and 1496. This long, didactic 11th century poem consisted of catchy, sometimes humorous verses pertinent to diet and hygiene and was memorized by generations of physicians. The Library also has a late medieval vellum manuscript done about 1410 in South Germany whose illustrations relate parts of the body to the zodiac for purposes of venesection (the operation of opening a vein for letting blood).

The Library's copy of *Fasciculus medicinae* (*Medical Miscellany*) (1495, Venice) is recognized as the first medical text with realistic illustrations and marks the transition to Andreas Vesalius' landmark work in human anatomy, *De humani corporis fabrica* (*On the Structure of the Human Body*), published in Basel in 1543. The magnificent woodcut plates are both lavishly beautiful and astoundingly accurate. The Library has the first edition of this classic in both the science of medicine and the art of printing.

During the next century, William Harvey issued in 1628 his model of accurate observation and scientific reasoning known as *De motu cordis* (*On the Motion of the Heart*). His brilliant and easily understood experiments demonstrated that the heart was a pump and that blood flowed in a continuous one-way cycle. The Library's earliest copy of his work is the 1643 Latin edition published in Padua, Italy. It also has the first English-language edition, called *Anatomical Exercises of Dr. William Harvey*, published in London in 1653.

Among the more modern medical landmarks in the Library are the original 1897 Russian version of Ivan Pavlov's pioneering work in the physiology of behavior, *Lektsii o rabotie glavnykh pishchevaritel'nykh zhelez* (*Lectures on the Function of the Main Food-Digesting Glands*), published in St. Petersburg. Besides much of the major works of Pasteur and Koch, the Library also has Sigmund Freud's greatest work, *Die*

(Cont. on p. 418)

Science *(Cont. from p. 417)*

Traumdeutung (*The Interpretation of Dreams*), published in Leipzig, Germany, in 1899. The Sigmund Freud Collection in the Library's Manuscript Division is the largest collection of his papers.

The alchemist and his assistant in their lab are shown here in the chapter 7 frontispiece from Thomas Norton's influential Ordinall of Alchimy. *Norton's translated work was the largest text in Elias Ashmole's* Theatrum chemicum britannicum.

The history of chemistry was long-dominated by the fertile subculture of alchemy, and the Library's collections certainly reflect that legacy. This alchemical tradition is reflected in such collected works as *De alchemia* published in Nuremberg, Germany, in 1541; Lazarus Zetzner's *Theatrum chemicum* (*Chemical Theater*) (the largest and most comprehensive collection) published in Strasbourg, France, in 1659–1661; and Jean Jacques Manget's *Bibliotheca chemica curiosa* (*A Thoroughgoing Chemical Library*) (Geneva, 1702). Each work was a fascinating combination of myth and fact, wild speculation with real empiricism.

Robert Boyle's *The Sceptical Chymist* attacked the unscientific nature of these works and called for a more systematic chemistry. The Library has the 1668 Latin edition of this work (Rotterdam, the Netherlands) as well as the 1680 English version (Oxford).

The next century's progress is mapped in the Library's copies of Black, Cavendish and Priestley and culminates in the collection's first edition of Antoine Laurent Lavoisier's *Traité élémentaire de chimie* (*Elementary Treatise on Chemistry*). Published in Paris in 1789, this work cleared away the confusion of centuries and offered a clear, unified picture of chemistry as a real, modern science. The 19th century successes of Dalton, Davy, Mendeleev and Gibbs are also well documented in the Library.

The useful metaphor of Earth as a book to be read came relatively late to geology, its early history being mostly dominated by religion. Beginning with the Library's 1491 Pavia edition of *De mineralibus* (*On Minerals*), written by the 13th century monk Albertus Magnus, the Library's collection contains the crowning work on metals and mining, *De re metallica* (*On Metals*). Written by Georg Bauer, who was known as Agricola, this work has 273 large woodcut illustrations and was published in Basel in 1556.

Agricola's extensive knowledge of all aspects of mining and metallurgy enabled him not only to amass a personal fortune but to contribute a classic work to the field he loved so well. His De re metallica *was the product of a lifetime of practical experience and reflected his scientific bias for the empirical and demonstrable.*

The groundwork for modern geology was laid by James Hutton, whose "Theory of the Earth" was published in 1788 in the inaugural volume of *Transactions of the Royal Society of Edinburgh*. This first volume is in the collections, as is the famous and colorful large-scale geological map published in London in 1815 by William Smith, called *A Delineation of the Strata of England and Wales with Part of Scotland*. This beautiful map became the model for all subsequent geological maps and also laid down the principles of paleontological stratigraphy. The Library also has Charles Lyell's masterly work of synthesis, *Principles of Geology*, as it was first published in London in 1830–1833.

This beautiful page is from the first printed edition of Euclid's Elements. *Euclid's systemic exposition of the leading propositions of elementary geometry and his unique axiomatic arrangement and presentation made this work the most successful textbook of all time. This late 15th century version is a revision by Campanus of Novara (13th century) of an Arabic version of the Greek text made by Abelard of Bath (12th century).*

Throughout its history, mathematics has had both an abstract and a highly practical side. It was and is

a realm of knowledge that makes for a fertile mix of the real and the ideal.

Beginning with the Library's beautiful copy of the first printed edition of Euclid's *Elementa geometria* (*Elements of Geometry*), published in Venice in 1482, the collections show a particular strength. They contain the first complete edition of Archimedes' works, *Opera, quae quidem extant, omnia* (*Complete Surviving Works*), whose text in both Greek and Latin is accompanied by many diagrams. It was published in Basel in 1544. Also represented is one of the more significant works of early printing, Luca Paccioli's *Somma di aritmetica, geometria, proporzione e proporzionalita* (*The Whole of Arithmetic, Geometry, Proportion and Proportionality*), printed in Venice in 1494.

In addition to such 16th century greats as Vieta and Napier, and 17th century contributors like Fermat and Descartes, the Library has the first editions of both Newton's and Leibniz's work on the calculus. It also has first editions of the next century's greats, like Euler, Lagrange and Gauss. George Boole's mathematization of logic is seen in the Library's copy of his landmark work, *An Investigation of the Laws of Thought*, published in 1854 in London. Today, Boolean algebra has a wide field of application and is generally considered to have provided the basis for modern computer systems and languages.

In its goal of knowing the physical world at its most elemental, physics best exemplifies the audacious intellectual strivings of mankind. It does not, however, remain solely in the realm of theory, for throughout its history, it has regularly insinuated itself into our culture by offering its "world-picture" to the nonscientist as well.

The most pervasive of these were the cosmological notions and theory of the structure of matter offered by Aristotle. Both are contained in the Library's copy of his *Opera*, published by Aldus Manutius in Venice between 1495 and 1498. Aristotelian physics and its espousal by the Scholastics was defeated by the final work of Galileo, his *Discorsi e dimostrazioni matematiche, intorno a due nuoue scienze* (*Mathematical Discourses and Demonstrations, Relating to Two New Sciences*), published in Leiden, the Netherlands, in 1638. The Library has the first edition of this defiant book, which offers a rational conception of a knowable universe.

According to Descartes' mechanical ideas, the universe operated as a continuously running machine that God had set in motion. He rejected the notion of a void in space and dismissed Newton's action at a distance (gravitation). Instead, he argued that space was full of a subtle matter he called "plenum," which swirled around in vortices. Planets thus moved by actual mechanical contact with the plenum. Here, his system of vortices carries the planets around the sun.

Under its influence as well as that of Descartes' mechanism, physics saw the rapid development of mechanical experimentation in the work of Torricelli, Pascal, Guericke and Boyle—all well represented in the Library. Much later advances in electricity by the likes of Galvani, Volta, Oersted and Ampère led to the achievements of Faraday and Maxwell.

The Library has Faraday's three-volume *Experimental Researches in Electricity* as it was first published in London in 1839–1855. Faraday demonstrated the unity of all forms of electricity and gave James Clerk Maxwell the basis for his hypothesis that identified light as an electromagnetic phenomenon. Maxwell then brought the three main fields of physics—electricity, magnetism and light—together in his *A Treatise on Electricity and Magnetism*, which the Library has as it was first published in Oxford in 1873.

Following this, the classic, or Newtonian, world view was profoundly modified by a new system of physical thought embodied in Einstein's special theory of relativity. The Library has a unique manuscript version of Einstein's landmark 1905 paper "Zur Elektrodynamik bewegter Körper" as it was rewritten by him in 1943. It also has the original journal articles of Rutherford, Bohr, Planck and Heisenberg, whose explanations and theories have come to reshape our 20th century world view.

This brief and highly selective sampling of some of the treasures found in the science collections of the Library offers but a hint of the collective richness found there. Yet considered individually, each of these great books is a landmark of human achievement, a moment of intellectual magic captured on paper. Whether they are works of insight and genius or works of diligence and perseverance, these are works of man at his best—in a sense at his most human.

As primary sources in the history of science, each could be said to constitute a significant piece of the infinite puzzle of the world we live in. But beyond the knowledge they contain, each embodies a genuine wonder about the natural world that can give us in the 1990s a new sense of adventure and discovery. Such a feeling or impression could, in the long run, be as valuable as the actual information they offer us.

Leonard Bruno is a senior science specialist in the Science and Technology Division. Currently he is writing a book on the Library's collections in the field of technology.

East meets West at Law Library (from left): Bozena Sarnecka-Crouch, Justice Stanislaw Dabrowski, interpreter Krzysztof Halecki, Chief Justice Adam Strzembosz, Justice Alicja Nalewajko and M. Kathleen Price

Supreme Court Delegation Visits Law Library

On Oct. 31 a delegation from the Polish Supreme Court visited the Law Library and met with Law Librarian M. Kathleen Price and Polish law specialist Bozena Sarnecka-Crouch.

Unlike in the United States, where a Supreme Court appointment is for a lifetime, under a Dec. 20, 1989, Polish law, the term of office of the previous Supreme Court Justices expired June 30, and thus new members were appointed.

The delegation consisted of recently appointed Chief Justice Adam Strzembosz and Justices Alicja Nalewajko and Stanislaw Dabrowski.

They were interested in gaining an understanding of the American legal system, including the jurisdiction of state and federal courts and of legal education in the United States. Their visit was sponsored by the United States Information Agency and arranged by the Visitor Program Service of Meridian House International.

The justices were briefed on the organization and activities of the staff, including an overview of their research services to Congress, which cover all legal systems and jurisdictions of the world.

In addition to the Library, the delegation met with their professional counterparts on the U.S. Supreme Court—Chief Justice William H. Rehnquist and Justice Sandra Day O'Connor. They also met with state and federal judges. Their itinerary also included meetings with officials at the Departments of Justice and State. During their sojourn, the justices also talked with university faculty and students at the law schools of Duke, Harvard and Columbia.

ATTENTION LC RETIREES

On Thursday, Dec. 20, Librarian of Congress James H. Billington will welcome LC retirees back to the Library for the traditional holiday festivities. The day's activities will begin at 11 a.m. with the Carol Sing in Madison Hall and will be followed by a luncheon at noon for retired staff only in the Montpelier Room, sixth floor, Madison Building.

Invitations were mailed to retirees the week of Nov. 19. If you are an LC retiree and have not received your invitation, call the Special Events Office at (202) 707-1616.

Toys for Tots

Boxes for the collection of food and toys are in the lobbies of the Jefferson, Adams and Madison buildings. Collections will be accepted until Dec. 21.

Jack McDonald of LC Dies

Jack McDonald Jr., chief of the Library Services Division in the Congressional Research Service (CRS), died at his home in Washington, Nov. 6 at the age of 54. Mr. McDonald had headed Library Services, the information support arm of CRS, since July 1979.

CRS Director Joseph E. Ross described Mr. McDonald as a "good and innovative manager of a key CRS division and a strong and vital member of the CRS Management Team whose talents will be sorely missed."

Members of his staff commended Mr. McDonald last summer for his encouragement of staff recognition and his commitment to staff development. A citation they presented to him stated: "You have seen potential in your staff, encouraged staff to seek challenges and promoted professional growth and training opportunities. We appreciate your support, your advice based on good sense and experience, your gentle good humor and your genuine concern for staff."

Mr. McDonald joined the Library in 1961 as a searcher-editor in the former Union Catalog Division. He transferred to the Loan Division in 1963 and served there as a reference librarian, assistant head of the Records Section and supervisor of the Central Charge File. In 1968 he became administrative officer of the former Reference Department, where he was promoted to executive officer in 1974. He returned to the Loan Division as its chief in 1976.

Mr. McDonald's survivors include his mother, Mrs. Esther Keith of Oklahoma City; one sister, Mrs. Ethel Adamson; and six nieces and three nephews.

LC's Overseas Offices: An Overview, Part 2

Dr. Billington met Gene Smith during his travels to Indonesia.

This is a second article describing the Library's overseas offices. (Part 1 appeared Oct. 8)

The inauguration in 1962 of the overseas acquisitions and cataloging program marked an innovative approach to the problem of foreign acquisitions, and signaled the Library's commitment to obtaining hard-to-acquire foreign publications.

The offices overseas have since played a major role in building the Library's collections of foreign materials, and in providing bibliographic access to them.

In recent years acquisitions by the six overseas offices for the Library have averaged about 250,000 pieces per year, with participant libraries receiving an additional 500,000 pieces annually.

The Cairo Office

The LC Cairo office's area of responsibility includes 18 countries: the Arabic-speaking nations of the Middle East, plus Turkey.

From this region it acquires publications for the Library of Congress and for 35 participating U.S. libraries in the Middle East Cooperative Acquisition Program (MECAP). As in the other cooperative acquisitions programs administered by the Library, participants receive materials according to their selection profiles, by geographic area and subject. Estimates of projected publications costs are made annually, an administrative surcharge is added, and funds are then deposited with the Library of Congress by the MECAP program members.

The Cairo office opened, under the PL–480 program, in January 1962, with an American field director and 11 local staff.

(The PL–480 program was initiated by passage of the Agricultural Trade Development and Assistance Act of 1954. The overseas effort began because the Library was, for many years, able to take advantage of U.S. earnings of foreign currencies through the sale of agricultural commodities under the law. The currencies were known as Special Foreign Currencies, or SFC, and the programs were called Special Foreign Acquisitions Programs. *See LC* Information Bulletin, Oct. 8, 1990.)

By mid-1967 the staff had grown to 20, and the number of participating libraries, originally 11, had risen to 24. Following the outbreak of hostilities between Israel and Egypt in June 1967, the field director, along with many other American officials attached the U.S. Embassy, was withdrawn. Cairo remained without a resident field director until 1976. During the 1970s, the Karachi and Nairobi field directors supervised the Cairo office with frequent visits.

The Cairo office is currently headed by field director Will Tuchrello, who has a local staff of 35.

The transition from a PL–480 SFC (Special Foreign Currency) program to a dollar-funded program occurred in 1980, with participants exercising greater selectivity and thereafter paying for what they received.

Political developments can readily affect acquisitions work: For example, Mr. Tuchrello notes that "the current Iraqi crisis and embargo have terminated our access to Iraqi publications." Although the geographic scope of the office has been the entire Middle East, for many years acquisitions trips within the region were, for a variety of reasons, relatively infrequent and/or impractical. In practice this meant that the office was sometimes limited to commercial publications it could obtain from local book suppliers.

During the past decade, official travel by American or Egyptian staff has been much more common, with a consequent improvement of coverage from countries in the Maghreb and Arabian peninsula. Blanket order dealers have been sought and identified, and bibliographic representatives have been put on

(Cont. on p. 422)

Overseas Offices *(Cont. from p. 421)*
contract in many countries. However, the majority of publications acquired by the Cairo office come through Cairo book dealers.

A response to the perennial problem of limited supplies of nonpriced publications, available chiefly on exchange, was the implementation in 1981 of a Middle East Microfiche Program, under which copies of scarce materials are microfiched at the Library's New Delhi office and made available through the Photoduplication Service.

Romanized Arabic cataloging records are provided to the Library and participants. Since 1963 the *Accessions List: Middle East* has provided a continuous record of the office's new acquisitions. It includes entries for Iran acquired by the Karachi office and is mailed to more than 950 libraries and other institutions.

The Cairo office also administers a second cooperative program, the Arabic Reading Collection program, whereby a selected list of popular monographs is provided to participants, primarily large public libraries serving Arabic readers in the United States.

The Karachi Office

The Karachi office acquires publications from Pakistan, Afghanistan and Iran for the Library and 29 participant libraries. The office is headed by an American field director, Helen Poe, who has a local staff of 28.

The Karachi office opened December 1961, as a PL-480 office, simultaneously with the New Delhi office. For several years, until 1965, there was no resident field director: The New Delhi field director was also responsible for the Karachi office.

The conversion of the office from an SFC (Pakistani rupees) appropriation to a dollars budget occurred in fiscal 1988. As in other offices where this changeover had occurred, participants were requested to make dollar contributions to the program for their publications, plus an administrative charge. A subject profile was devised for the Pakistani and Iranian programs to allow participants to exercise greater selectivity in the materials acquired on their behalf.

The office acquires a broad range of serial and monograph publications from Pakistan. The acquisition of publications from Afghanistan and Iran is, given the prevailing political constraints, challenging. Afghan imprints are obtained from sources in Quetta and Peshawar in Pakistan. Iranian publications have been obtained from a Tehran dealer and from sources in Pakistan.

The office conducts an active microform program. Pakistani and Iranian newspapers and gazettes are sent to the New Delhi office for microfilming. Scarce monographic and serial publications from Pakistan, Afghanistan and Iran are also sent to New Delhi for microfiching, after being cataloged in Karachi.

As in the other field offices, Karachi's catalogers follow *Anglo-American Cataloging Rules II* in preparing bibliographic data for materials acquired. The average rate of cataloging output over the last five years has been 3,355 titles per year.

Accessions lists for Brazil, East Africa, the Middle East and Southeast Asia are produced and distributed by the Karachi office. Karachi's bibliographic data are included in the *Accessions List: South Asia*, published by the New Delhi office.

The Jakarta Office

The office in Jakarta acquires publications from Indonesia, Malaysia, Brunei and Singapore for the Library and participants. A new program begun in January provides publications from Thailand to U.S. research libraries.

Besides the Library, the office serves 17 participants in its South East Asian Cooperative Acquisitions Program. The office also acquires publications from other Southeast Asian countries for the Library of Congress only. These countries are Cambodia, Laos, the Philippines (since 1988) and Vietnam. Field director Gene Smith heads a local staff of 16.

The Jakarta office was established in 1963 under PL-480. In 1970 the office was converted to a dollar-funded National Program for Acquisitions and Cataloging (NPAC) program (SFC funds [Indonesian rupiahs] having been depleted), the first of the overseas offices to make this transition.

Acquisitions from the region entail not only the use of blanket order dealers, but also frequent acquisitions travel both within Indonesia and to the other countries covered. According to Gene Smith, "Acquisition of Indonesian material remains chiefly a matter of on-the-spot cash purchases and field trips."

Active bibliographic representatives in Manila have significantly increased the Library's receipts of Philippine materials.

Along with the other field offices, the Jakarta office has increasingly automated its operations in recent years, using microcomputers and readily available software. All six field offices now use the same data base management system, known as IODA, for acquisitions, distribution and accounting functions.

IODA, the Integrated Order, Distribution and Accounting system, was first used in the New Delhi office. Participant profiles are accommodated in this system, which also generates orders and updates accounts. IODA produces reports that analyze receipts by country, format, subject and dealer.

The Jakarta office microfiche program was initiated in 1978, using a microfiche camera installed in the New Delhi office. The elusive nature

of many Indonesian publications, particularly government ones, made the implementation of such a program attractive. Since 1988 a microfiche camera has been in operation in the Jakarta office, enabling the office to microfiche its own materials. More than 9,000 fiche were produced in fiscal 1990.

The *Accessions List: Southeast Asia* lists these microfiche in addition to other publications acquired and is mailed to more than 1,000 institutions.

In addition to administering the office, Gene Smith is active in several organizations promoting Indonesian-American cultural ties. He participated in the Eighth Congress of Southeast Asian Librarians (CONSAL VIII) held in Jakarta in June; the congress was officially opened by President Suharto.

The Nairobi Office

The office in Nairobi acquires and catalogs publications from 21 countries in Eastern Africa and the Western Indian Ocean, from Ethiopia in the Northeast to Lesotho in Southern Africa. A participant program serves, among others, the National Library of Medicine, the National Agricultural Library and a growing number of participants in a new Kenya serials program. Acting field director Ruth Thomas heads a local staff of 14.

The Nairobi office was established in 1966 as an NPAC office, serving only the Library of Congress. The first cooperative acquisitions program participant was added in 1976. The region covered has gradually grown over the years, from 12 nations to the present 21.

The acquisition of publications from the region has presented perennial challenges. Current national bibliographies from Eastern Africa are a rarity, as are other useful acquisitor's tools. Resourceful book dealers are few. In many countries official publications predominate and are often difficult to acquire in multiple copies, a fact that has inhibited the broader expansion of a multiple-copy participant program.

The office has relied on frequent acquisitions trips within the region; each country is visited annually or biennially. There is also a network of local acquisitions representatives who acquire publications by purchase or exchange, with frequent shipments to the Nairobi office.

Like the other field offices, the Nairobi office acquires materials on exchange, as well as by purchase; in fiscal 1990 more than 27 percent of the 28,190 pieces acquired for the Library came via exchange.

The Kenya serials program, inaugurated in 1990, offers participants a selected list of Kenyan newspapers and serials, both official and nonofficial.

Cataloging done by the Nairobi staff is reflected in the bimonthly *Accessions List: Eastern Africa*, which is received by nearly 1,000 institutions, of which about 40 percent are in Africa.

The Rio Office

The office in Rio de Janeiro acquires publications for the Library from Brazil and Uruguay. It also acquires Brazilian serials in a new cooperative program for 20 U.S. research libraries. The office, with a local staff of 14, is headed by Smith Richardson, acting field director.

Like the Nairobi office, the Rio facility opened in 1966 as an NPAC office serving LC, for Brazilian publications. Uruguay was added in fiscal 1986, and a participant program for serials was started in 1990.

All of the field offices experience the vicissitudes of the local economies in which they operate. In Brazil, chronic inflation creates many problems for the Rio office, ranging from frequent salary adjustments to rapidly escalating serial subscription costs.

Two-thirds of the Brazilian publications acquired by the Rio office are on an exchange basis, from approximately 3,000 exchange partners. In fiscal 1990 this amounted to more than 17,000 out of a total of over 25,000 pieces acquired. The office's exchange file is an invaluable resource, not only for the Rio office staff, but also for librarians from the Biblioteca Nacional and others interested in the Brazilian publications scene.

The office has been successful in adding to the Archive of World Literature on Tape, a Library project also pursued by other field offices, in which leading local writers who read selections from their works are recorded. A tape by former President Jose Sarney is the latest addition to this archive.

A special project undertaken by the Rio office was the collection and organization of materials for "Brazil's Popular Groups: A Microfilm Collection of Materials Issued by Sociopolitical, Religious, Labour and Minority Grass-Roots Organizations, 1966–1986," which is available from the Library's Photoduplication Service.

More than 500 copies of the *Accessions List: Brazil and Uruguay* are distributed.

—James C. Armstrong

ATTENTION

The LC *Information Bulletin* will not publish Dec. 31. The last issue of Volume 49 for 1990 will be dated Dec. 17. The *Information Bulletin* will resume publication Jan. 14 with Vol. 50, No. 1.

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